APPARATUS AND METHOD FOR MEASURING TRANSIENT CHIRP OF OPTICAL PULSE

Publication number:	KR20010001620
Publication date:	2001-01-05
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Classification:	
- international:	***G01J11/00;*** **G01J11/00;** (IPC1-7): G01J11/00
- European:	
Application number:	KR19990020971 19990607
Priority number(s):	KR19990020971 19990607

Abstract of **KR20010001620**

PURPOSE: An apparatus and a method for measuring a transient chirp of an optical pulse are provided to simply measure the transient chirp generated when a light source is modulated by using an arrayed waveguide grating serving as a wavelength demultiplexer without using any expensive measuring equipment. CONSTITUTION: An apparatus for measuring a transient chirp of an optical pulse includes a pulse pattern generator(20) for generating an electrical pulse pattern and information required for the synchronization with the pulse pattern, a signal converter(22) for modulating the electrical pulse pattern to an optical signal to output the optical signal with a predetermined wavelength, a wavelength demultiplexer(24) for receiving the modulated optical signal to separate the signal per wavelength to output, a signal measuring part(26) for measuring wavelengths of outputs from the wavelength demultiplexer and the signal converter, measuring insertion losses of selected two output ports of the wavelength demultiplexer, and measuring a change amount of an optical output power with relation to the insertion losses and times for the output ports by using the information required for the synchronization, and a computation controller(28) for computing a transient chirp by using the change amount of the optical output power.